

AMENDMENTS TO THE CLAIMS:

Complete Listing of Claims

Claims 1-8 (canceled).

Claim 9 (previously presented): An automatic level control (ALC) method for use in a video signal processing system, the method comprising the steps of:

determining the mean back porch level (N_{BP}) over a selected interval of the video signal;

selecting a target back-porch level (L_{NOM});

determining a new fine offset control value $O_F[n]$, described by the relationship;

$$O_F[n] = (1 - \alpha) * [N_{BP}/G_P - (N_{BP}/G_P - O_F[n-1]) * (a/b + G_F[n]) / (a/b + G_F[n-1])] + \alpha * [L_{NOM}/G_P - (N_{BP}/G_P - O_F[n-1]) * (a/b + G_F[n]) / (a/b + G_F[n-1])],$$

wherein;

$O_F[n]$ is the new fine offset control value;

$O_F[n-1]$ is the immediately preceding fine offset control value;

α is a recursive filter coefficient;

$G_F[n]$ is a fine gain control value;

$G_F[n-1]$ is an immediately preceding fine gain control value;

a is the y-intercept, and b is the slope of a linear fine gain control equation;

L_{NOM} is the target back porch level value referred to the signal output;

N_{BP} is the mean measured back porch level value; and

G_P is gain applied between a fine offset stage and the signal output.

Claim 10 (previously presented): An automatic level control (ALC) method according to claim 9 wherein the steps are performed at a rate faster than the frame rate of the video signal.

Claim 11 (original): An automatic level control (ALC) method according to claim 9 wherein the steps are performed at a frame rate of the video signal.

Claim 12 (original): An automatic level control (ALC) method according to claim 9 wherein the steps are performed at a rate slower than the frame rate of the video signal.

Claim 13 (previously presented): An automatic level control (ALC) method for use in a video signal processing system, the method comprising the steps of:

determining the mean back porch level (N_{BP}) over a selected interval of the video signal;

selecting a target back-porch level (L_{NOM});

determining a new fine offset control value $O_F[n]$, described by the relationship;

$$O_F[n] = N_{BP}/G_P - (N_{BP}/G_P - O_F[n-1]) * G_F[n] / G_F[n-1] + \alpha * (L_{NOM} - N_{BP})/G_P,$$

wherein;

$O_F[n]$ is the new fine offset control value;

$O_F[n-1]$ is the immediately preceding fine offset control value;

α is a recursive filter coefficient;

$G_F[n]$ is a fine gain control value;

$G_F[n-1]$ is an immediately preceding fine gain control value;

L_{NOM} is the target back porch level value referred to the signal output;

N_{BP} is the mean measured back porch level value; and

G_P is gain applied between a fine offset stage and the signal output.

Claim 14 (previously presented): An automatic level control (ALC) method according to claim 13 wherein the steps are performed at a rate faster than the frame rate of the video signal.

Claim 15 (original): An automatic level control (ALC) method according to claim 13 wherein the steps are performed at a frame rate of the video signal.

Claim 16 (original): An automatic level control method (ALC) according to claim 13 wherein the steps are performed at a rate slower than the frame rate of the video signal.

Claim 17 (currently amended): An automatic level control (ALC) system comprising:

- means for processing an analog video signal with a coarse gain and a coarse offset;

- means for processing a digital video signal with a fine gain and a fine gain offset, where said digital video signal comes from digitizing an output of said means for processing an analog video signal;

- means for automatically controlling the level of the digital_video signal whereby the back porch level is maintained at a target value by applying a fine offset adapted to the level of fine gain of the video system, thereby eliminating offset transient caused by a step change in the gain.

Claim 18 (previously presented): An automatic level control (ALC) system according to claim 17 adapted to operate at intervals more frequent than the frame rate of the video signal.

Claim 19 (original): An automatic level control (ALC) system according to claim 17 adapted to operate at the frame rate of the video signal.

Claim 20 (original): An automatic level control (ALC) system according to claim 17 adapted to operate at intervals less frequent than the frame rate of the video signal.